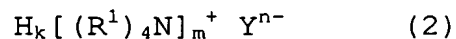
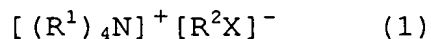


CLAIMS

1. A composition for forming porous film, the composition comprising siloxane polymer and one or more quaternary ammonium salts represented by following formula (1) or (2):



wherein R^1 independently represents a straight chain or branched alkyl or aryl group having 1 to 10 carbons which may have a substituent and R^1 's may be same or different; R^2 represents a hydrogen atom or an straight chain or branched alkyl or aryl group having 1 to 10 carbons which may have a substituent; X represents CO_2 , OSO_3 or SO_3 ; Y represents SO_4 , SO_3 , CO_3 , O_2C-CO_2 , NO_3 or NO_2 ; and k is 0 or 1, m is 1 or 2 and n is 1 or 2 in proviso that n=1 requires k=0 and m=1, and n=2 requires k=0 and m=2, or k=1 and m=1.

2. The composition for forming porous film according to Claim 1 wherein said siloxane polymer has a weight-average molecular weight of 10,000 to 1,000,000 using polyethylene as a standard.

3. A method for forming porous film comprising steps of applying said composition of Claim 1 or 2 on a substrate to form a film and heating the film.

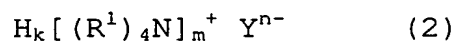
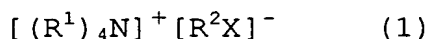
4. A porous film obtainable from said composition of

Claim 1 or 2.

5. An interlevel insulator film formable by said composition of Claim 1 or 2.

6. A semiconductor device comprising internal porous film which is formable by

applying on a substrate a composition for forming porous film comprising siloxane polymer and one or more quaternary ammonium salts represented by following formula (1) or (2):



wherein R^1 independently represents a straight chain or branched alkyl or aryl group having 1 to 10 carbons which may have a substituent and R^1 's may be same or different; R^2 represents a hydrogen atom or an straight chain or branched alkyl or aryl group having 1 to 10 carbons which may have a substituent; X represents CO_2 , OSO_3 or SO_3 ; Y represents SO_4 , SO_3 , CO_3 , O_2C-CO_2 , NO_3 or NO_2 ; and k is 0 or 1, m is 1 or 2 and n is 1 or 2 in proviso that n=1 requires k=0 and m=1, and n=2 requires k=0 and m=2, or k=1 and m=1;

and heating.

7. The semiconductor device according to Claim 6 wherein said siloxane polymer has a weight-average molecular weight between 10,000 and 1,000,000 using polyethylene as a standard.

8. The semiconductor device according to Claims 6 or 7

wherein said porous film is between metal interconnections in a same layer of multi-level interconnects, or is between upper and lower metal interconnection layers.